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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,200	07/26/2006	Jingwei Zhang	284467US2PCT	9279
22850 7590 09/27/2007 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER A, MINH D	
			ART UNIT 2821	PAPER NUMBER
			NOTIFICATION DATE 09/27/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/565,200

Applicant(s)

ZHANG ET AL.

Examiner

Minh D. A

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16 and 18-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16, 18-300 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. This is a response to the Applicants' filing on 6/25/07. In virtue of this filing, claims 16, 18-30 are currently presented in the instant application.

Claim Objections

2. Claim 1 is objected to because of the following informalities:

In claim1, line14, "an image of the current" should it be changed to ---a zero current---. Since it will make clear the claim language. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 16, 20-24 and 27-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Giannopoulos et al (Patent No: 6, 359, 387).

Regarding claim 16, Giannopoulos discloses, in figures 1-4, a gas discharge lamp for an electrical supply device configured to deliver energy to a structure that includes at least first (EL1) and second electrodes (EL2) and inherently a space containing a gas(since the lamp has gas discharge) to be excited, the device comprising: a voltage generator(Vhv); an inductor (Lr) connected to the voltage generator(Vhv) and connected to the structure to supply the first (EL1) and second electrodes (VI2) with a periodic voltage of a frequency; and resonance means (a control

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circuit (11) having a switches and inductor and capacitors and transformer) for fixing the frequency at substantially the resonant frequency of the system of the structure and the inductor(Lr); wherein the inductor(Lr) is connected to the first electrode (EL1), and the resonance(a control circuit (11) having a switches and inductor and capacitors and transformer)_means comprises: first and second switches (G1-G2), the first switch (G1) placed between the voltage generator(Vhv) and the inductor (Lr), the second switch(G2) connected to the first switch (G1) and to the second electrode (G2); and (a control circuit)(11)means for controlling the switches (G1-G4), the means for controlling being coupled to (Rs) means for measuring an image of the current (zero current) passing through the structure, a dual clock generator (37) for fix the frequency. See col.3, lines 55-67 to col.6, lines 1-38.

Regarding claim 20, Giannopoulos discloses, in figures 1-4, a gas discharge lamp wherein the resonance means is configured to operate for a plurality of resonant frequencies.

Regarding claim 21, Giannopoulos discloses, in figures 1-5, a gas discharge lamp includes at least first and second electrodes (EL1 and EL2) and a space containing a gas to be excited, the device comprising: a voltage generator (Vhv); an inductor (Lr) in the form of a transformer provided with a primary winding and with a secondary winding (see figure 5), the primary winding connected to the voltage generator (Vhv) and the secondary winding connected to the first and second electrodes[Ws5] to supply the first and second electrodes with a periodic voltage of a frequency; and resonance means (control circuit (11) for fixing the frequency at

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substantially the resonant frequency of the system the structure and the inductor (Lr5); wherein the resonance (control circuit) means comprises a switch (G1) placed in a path from the voltage generator (Vhv) to the primary winding of the transformer (T5), and inherently discloses a control system connected to the switch (G1-G2) for open and close over a period, wherein closing of the switch, which is closed for a duration, is triggered by choice at one of the following instants: at a zero crossing of the current flowing the structure; when the voltage crosses a threshold voltage; at a threshold light level; or when the current flowing through the structure crosses a threshold current(see figures 3 and 5, the arc current inverter is controlled by frequency and switching time to provided desired lamp operating parameters and Rs5 for measuring a zero current and the Rs5 may be used to detect the lamp operating parameters to achieve desired control).

Regarding claims 22-24, Giannopoulos discloses, in figures 1-4, a gas discharge lamp comprising a resistor (Rs) for measuring the current that delivers, to the control system (control circuit (11) having a plurality of switches), an image of the current (zero current) flowing through the structure, the closing of the switch within the period being triggered at the current zero crossing and wherein the duration of the time during which the switch is closed can be adjusted according to energy to be delivered to the structure.

Regarding claim 27, Giannopoulos discloses, in figures 1-4, a gas discharge comprising: a structure that includes at least first and second electrodes and a space containing a gas; and the supply device.

Regarding claim 28, Giannopoulos inherently discloses, in figures 1-4, a gas discharge wherein the structure includes two dielectrics associated respectively with the first and second electrodes and spaced apart so as to create the space. Since the discharge gas lamp should have a dielectric associated with electrodes to prevent the electric short and spaced apart for install a gas.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 18-19 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Giannopoulos et al (Patent No: 6, 359, 387) in view of Sun et al (Patent No: US: 6, 020, 691).

Regarding claims 18-19, in figures 1-4, Giannopoulos does not teach that, wherein the voltage is at least partly sinusoidal and for truncating the voltage (less voltage).

Sun discloses wherein the voltage is at least partly sinusoidal as shown in figures 4-5.

It would have thus been obvious to one having ordinary skill in the art to include the above the voltage is at least partly sinusoidal or for truncating the voltage disclosed in Reference of Sun in the gas discharge lamp of Giannopoulos to achieve the claimed

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invention. As disclosed in reference of Sun, the motivation for the combination would be increased the ignition for high intensity of lamp and would be improved the stable lamp arc operation.

Regarding claim 25, Giannopoulos discloses, in figures 1-4, a gas discharge lamp comprising the frequency is between (20KHz to 60 KHz).

Giannopolulos does not teach that, the frequency is between (10 Hz to 100 KHz).

However, it would have been obvious to one having ordinary skill in the art to have the frequency of Giannopoulos operating in the different frequency range, since it has been held that selecting desired frequencies for the lamp routinely employed in the lamp operation, where the frequencies of operation are selected by artisan as needed in a particular applicant, as frequency-scaling is routinely used.

7. Claims 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Giannopoulos et al (Patent No: 6, 359, 387) in view of Yoshida et al (Pub. No. US 2002/0027412).

Regarding claims 26 and 29-30, Giannopoulos discloses in the figures 1-5 that, the gas discharge lamp comprising the first and second electrodes of the gas discharge lamp.

However, Giannopoulos does not disclose that, the gas discharge lamp having the structure forms a flat lamp for a backlight and for deposition system for plasma CVD process.

Yoshidat discloses in the figures 6-8B that, the lamp circuit comprising the structure forms a flat lamp for a backlight and for deposition system for plasma CVD process.

It would have been an obvious to one of ordinary skill in the art at the time the invention was made to employ the first and second electrodes of the structure forming the flat lamp and for deposition system for plasma CVD process such as suggested by Yoshidat in the lamp circuit of Giannoulos in order to improve the backlight and improve to use in the fluorescent layer.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Citation of relevant prior art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Raiser et al (Pub. No: US 2002/0175629) discloses a method for starting a discharge lamp.

Prior art Okamoto et al (U.S. Patent No. 2002/0093295) discloses a light source device of a dielectric barrier discharge lamp.

Prior art Conrad et al (U.S. Patent No. 6,488,819) discloses a process and apparatus for chemical conversion.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Dieu A whose telephone number is (571) 272-1817. The examiner can normally be reached on M-F (5:30 AM-2: 45 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Owens Douglas W can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

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have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner

Minh A

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9/9/07

Shih-Chao Chen
SHIH-CHAO CHEN
PRIMARY EXAMINER